Wingwall #1 Installation Plan
for
State of Vermont Project: Jamaica ER-BRF 015-1 (23)

Town of: Jamaica, Vermont
County of: Windham

Prepared By:

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Overview

The Jamaica ER-BRF 015-1 (23) project involves the replacement of Bridge 30 which is located in the Town of Jamaica on Vermont Route 30, approximately 4.8 miles South of the Northern junction of Vermont Route 100 and 30. There is currently a temporary bridge in place, off alignment, that was installed after Tropical Storm Irene. The new structure will be approximately 132 feet in length with 243 feet of roadway work. This project also involves the replacement of an existing box culvert. The new precast concrete box culvert will be approximately 85 feet in length.

The existing temporary bridge approach and approach rail conflicts with the location of Wingwall #1 on the Southeast corner of the bridge.

Miller Construction, Inc. plan for the installation of Wingwall #1 to include a precast section from elevation 721.35 to elevation 729.65 spliced and grouted to the abutment, with a cast-in-place wingtop from elevation 729.65 to elevation 733.00 has been revised.

The revised plan for the installation of Wingwall #1 includes Wingwall #1 being cast-in-place after traffic has been routed onto the new bridge and the temporary approach is removed.

Procedure

The female end of #6 dowel bar substitutes shall be cast into Abutment #1 at 12 inch spacing. 3 sets of dowel bar substitutes shall be provided to VTrans Materials & Research for required testing. Reinforcing steel below the bridge seat (Elev. 727.06) shall be Level I. All reinforcing steel above the bridge seat (Elev. 727.06) shall be Level II. Due to difficulty obtaining Level II dowel bar substitutes, epoxy coated connectors shall be used where Level II is otherwise required (Per original review of this plan).

After placement and stripping of Abutment #1, timber lagging shall be installed in-line with P1. An L6 x 4 x ½ shall be mechanically attached to the back face of the abutment using Hilti HCA Coil Anchors (timbers bearing on the long leg of the angle). Approximate length of the timber lagging is 5 feet and it shall run behind existing in-place sheet piling on the opposite end. The Abutment shall be backfilled after timber lagging installation is complete.

The width of the approach slab shall be reduced by 6 feet on the South side of the slab until Wingwall #1 installation is complete and backfilled. With the addition of jersey barriers, the lane width will remain 12.5 feet during the installation of Wingwall #1, and no additional traffic control measures shall be required. Epoxy coated dowel bar substitutes shall be cast into the approach slab in order to splice reinforcing steel for the remaining 6 feet of width, which shall be placed after Wingwall #1 is installed, properly cured, and backfilled.